Rocky Flats Environmental Technology Site

Building 776/777 1st Floor In-Process/Final Survey Report

Survey Unit: 776008

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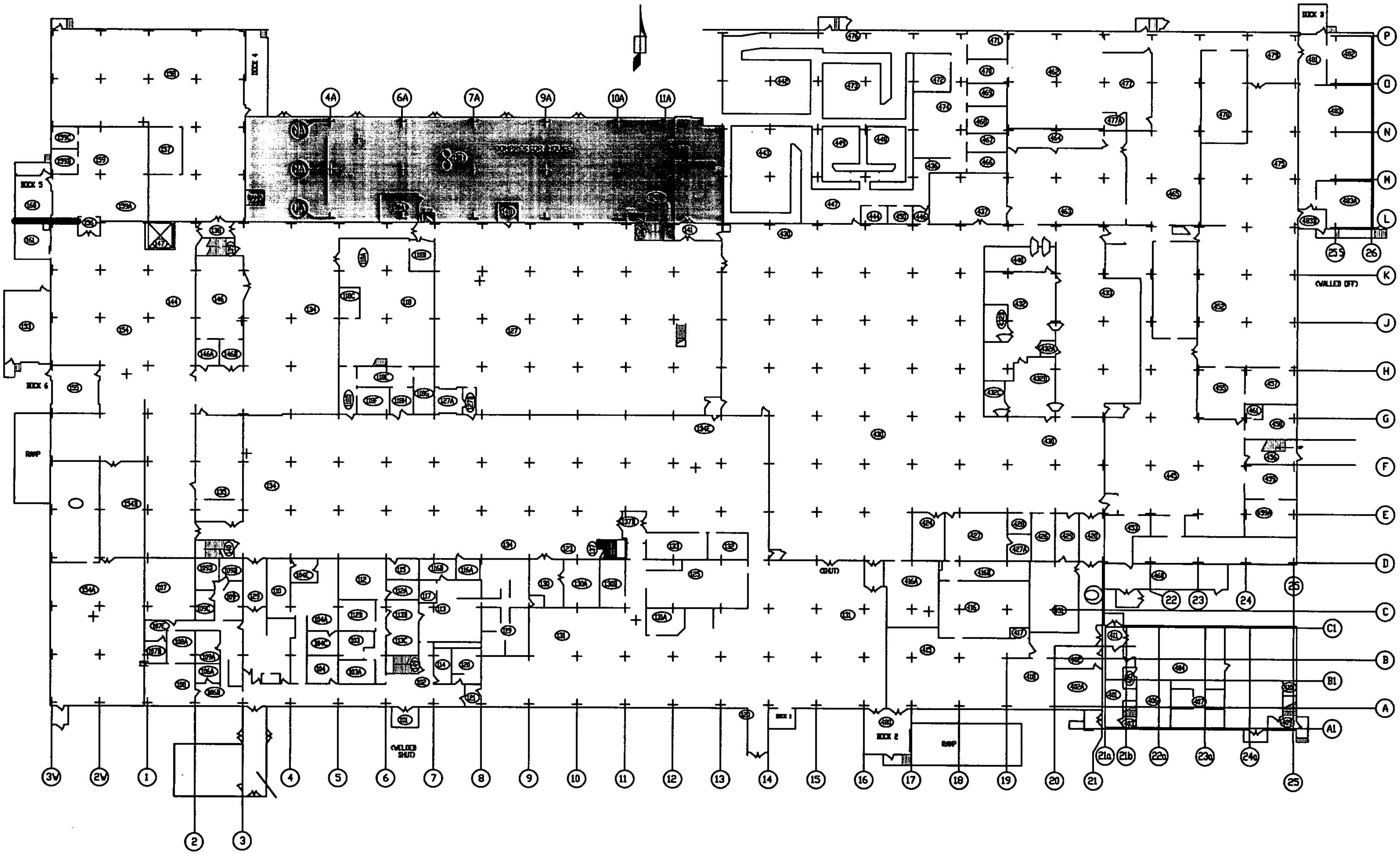
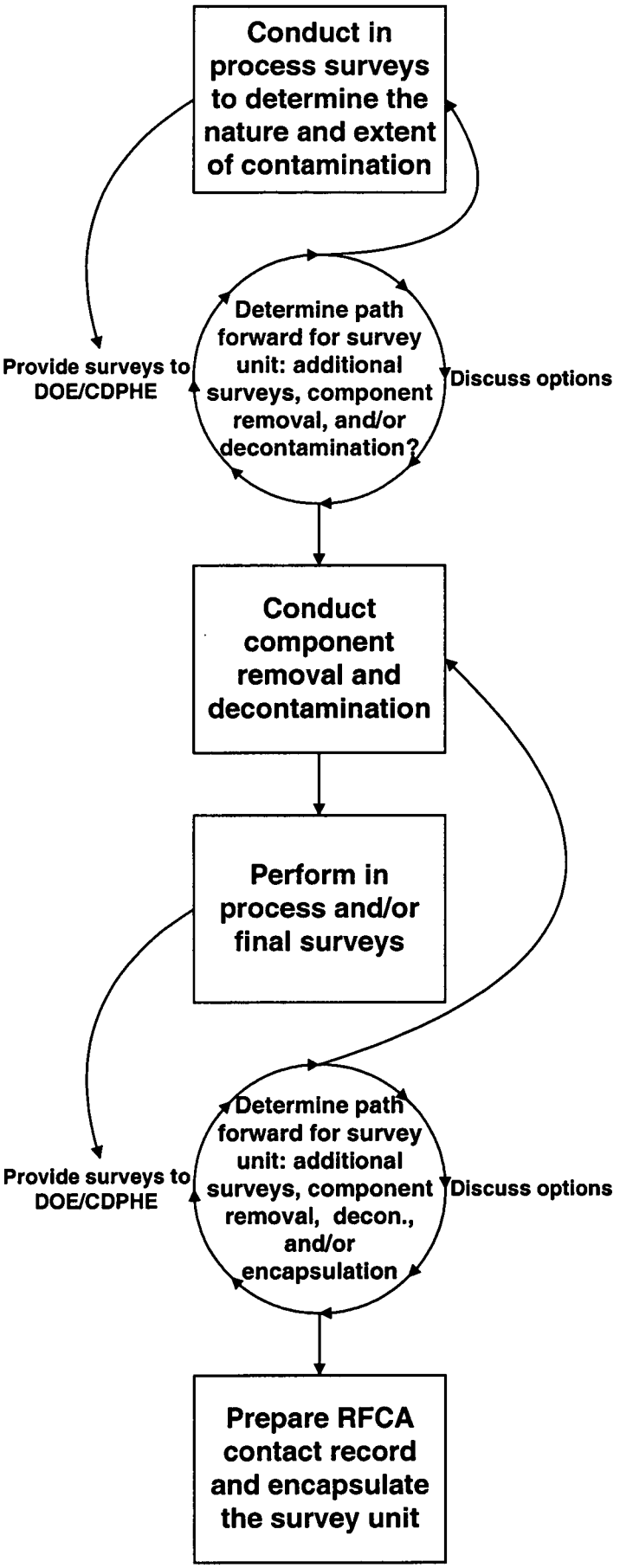
January 2005

B776/777 SURVEY UNIT 776008
1st FLOOR




Conduct in process surveys to determine the nature and extent of contamination
Determine path forward for survey unit: additional surveys, component removal, and/or decontamination?
Provide surveys to DOE/CDPHE
Discuss options
Conduct component removal and decontamination
Perform in process and/or final surveys
Determine path forward for survey unit: additional surveys, component removal, decon., and/or encapsulation
Provide surveys to DOE/CDPHE
Discuss options
Prepare RFCA contact record and encapsulate the survey unit

In-Process Survey Instructions
Survey Unit 776008

Purpose:

This instruction provides guidance for collecting data needed to determine the contamination levels in Survey unit 776008. Work to be performed in accordance with "INS-535-Ludlum2350-1 with Sodium Iodide Detector" and RSP-7.01 and 7.02.

Equipment and materials:

1) A Bicron G-5 detector (G-5) attached to a Ludlum 2350-1.

2) A Ludlum 44-17 detector (44-17) attached to a Ludlum 2350-1.

3) Probe holders for the G-5 and the 44-17 with tin side shield (side shield optional for the G-5).

4) Electra with attached DP-6, calibrated and daily response checked.

5) Access to a SAC-4 that has daily performance checks completed.

Procedure:

1) Inspect instruments for obvious damage and perform battery checks, as required.

2) Ensure the NaI instruments (G-5 and 44-17) are functioning by using Americium-241 source TS-912, counting the source for 60 seconds. Record readings from before and after survey (i.e., beginning and end of shift) on the daily response check sheet.

3) Obtain background measurements for floors, walls and ceilings with NaI detectors in room 404. For ceilings take background measurement as specified below.

   - ✓ For floors, concrete stairs, and cement walls, place the detector (G-5 preferred or 44-17) in holder, 30 cm from floor and perform background measurement.
   - ✓ For block walls, place the detector (44-17 preferred or G-5) in holder, 30 cm from wall and perform background measurement.
   - ✓ For ceilings and metal stairs, point detector towards ceiling, place thin metal sheet over probe and take background measurement.

   Perform 60-second count for all background measurements. Record all results in the designated space on the data collection sheet (this may be the remarks section).

4) All areas marked on the attached maps should be scanned. Use the appropriate detector and scan over each grid on the floors and ceilings. Scan over the entire surface of each grid by holding the detector within 6 inches of the surface. Scan rate should be about 1 foot per second. Listen for change in count rate. Locate the point that has the highest reading in the area and take the measurement at that point (sample location). If no elevated reading is detected during the initial scan, then use professional judgement to select sample location most likely to be contaminated in the grid and take the measurement at that point. Areas where equipment blocks more than 50% of the Grid area should be noted using an asterisk and comment in the "remarks" section. These areas should be scanned as much as possible and have contact readings taken at locations with the highest readings.

5) Obtain NaI measurements.

- ✓ For floors, take a 60-second NaI measurement at 30 cm placing the detector (G-5 preferred or 44-17) in the holder and centering the detector over the sample location.

- ✓ For block walls. Scan along the top of the wall holding the probe three inches from the wall. Scan at 6" per second over all accessible areas. Take one contact reading in each ten-foot section on the location with the highest NaI response.

- ✓ For walls, take a 30-second NaI measurement at 30 cm placing the detector (44-17 preferred) in the holder and centering the detector over the sample location. Take 30-second contact readings near wall penetrations (i.e., doorways) with elevated readings. Walls shall be surveyed by taking **one measurement every 6 feet on center**. No scanning is required, but any protrusions or other anomalies in the wall should be investigated. Document readings that are twice as high as the surrounding wall.

- ✓ For ceilings, take a 60-second NaI measurement at 30 cm placing the 44-17 holder and centering the detector over the sample location. Ensure there is a tin back-shield on the detector.

- ✓ For stairs scan the top surface and take a 60-second reading on contact with each step at the location with the highest reading/audible response.

Record all data using the grid number as the sample location number, as appropriate (i.e., specific assigned numbers for floors and ceilings. Use assigned wall and section numbers for walls).

6) For all NaI measurements, mark area where detector was placed for each reading by circumscribing the area where the measurement was taken.

7) Note any items or conditions that may have affected any measurement in the "remarks" section of the data collection sheet.

Survey Requirements					
	Surface	**Type of Survey**	**Detector**	**Placement**	**Scan Rate / Count Time**
Background	Block Walls	Background measurement	Ludlum 44-17	30 cm of wall in room 404.	60 seconds
	Floors, concrete stairs and Cement Walls	Background measurement	Bicron G-5 or Ludlum 44-17, as appropriate.	30 cm of floor in room 404.	60seconds
	Metal ceilings and Stairs	Background measurement	Ludlum 44-17	In room 404. Point probe upward. Place thin metal sheet over probe.	60 seconds
Scan	Floor	Total Alpha Activity	Preferred: Bicron G-5 Secondary: Ludlum 44-17	✓ Scan within 6" until highest reading is found	~ 1 foot per second
	Walls and Stairs	Top of walls	Ludlum 44-17	Scan within 3" until highest reading is found	~ 1/2 foot per second
	Ceiling	Total Alpha Activity	Ludlum 44-17	✓ Scan Within 6" until elevated reading is found	~ 1 foot per second
NaI Measurements	Floor	Total Alpha Activity	Preferred: Bicron G-5 Secondary: Ludlum 44-17	30 cm	60seconds
	Walls	Total Alpha Activity	Preferred: Ludlum 44-17 Secondary: Bicron G-5	30 cm. On contact once every 10 feet on top block or to investigate elevated readings on rest of wall	30 seconds
	Ceiling	Total Alpha Activity	Ludlum 44-17	30 cm	60 seconds
	Stairs	Total Alpha Activity	Ludlum 44-17	On contact.	60 seconds

Final Survey Instructions
Building 776 1st Floor
Survey Unit 776008

Purpose:

This instruction provides guidance for collecting gross gamma and removable contamination data to quantify the amount of residual contamination in Survey Unit 776008 prior to demolition. NaI measurements are performed in accordance with " INS-535-Ludlum2350-1 with Sodium Iodide Detector".

Equipment and materials:

1. A Ludlum 44-17 attached to a Ludlum 2350-1 set to collect five-minute counts that will be displayed on its LCD window.
2. A Bicron G-5 attached to a Ludlum 2350-1 set to collect five-minute counts that will be displayed on its LCD window.
3. One Electra with attached DP-6, calibrated and daily response checked.
4. Two probe holders, one for the G-5 and one for the 44-17 with tin shielding.
5. Calibrated and daily response checked SAC-4.
6. Measuring tape or laser range finder.

Note: The NE Electra with DP-6 probe and the Eberline SAC-4 shall be used in accordance with RSP-7.01 and 7.02

Procedure:

1. Inspect instrument for obvious damage and ensure battery voltage is equal to or greater than 4.6 volts. If battery voltage is less than 4.6 volts change the batteries.
2. Complete daily performance checks for Sodium Iodide detectors to ensure the instrument is functioning properly by using Americium-241 source TS-912. Record results on Sodium Iodide Data Sheet.
3. For floor and concrete wall background measurements, perform a 300-second background count with a Bicron G-5 for floors or Ludlum 44-17 for walls at background location in room 404. Record background counts next to "Bkg Floor" or "Bkg Concrete Wall"in background column of attached "Sodium Iodide Data Collection" sheets as needed.
4. For block wall background measurements, perform a 300-second background count with a Ludlum 44-17 at the background location in room 404. Record background counts next to "Bkg Block Wall" in background column of attached Sodium Iodide data collection sheets as needed.
5. For ceiling and metal floor background measurements, perform a 300-second background count with a Ludlum 44-17 or Bicron G-5 at background location in room 404. Hold the probe waist high, pointed toward ceiling using a sheet metal plate in front of the detector (take background measurement in this configuration). Record background counts next to "Bkg Metal Floor" for the G-5 and " Bkg Metal Ceiling" for the 44-17 on the attached Sodium Iodide data collection sheets as needed.
6. Mark the sample locations on the surfaces to be measured. Take all measurements on contact with the marked surface using tin side shields on the Bicron G-5 and tin side and back shields on the Ludlum 44-17. All Sodium Iodide readings shall have 300 second count times.
7. Collect sodium Iodide, total surface activity and removable surface activity measurements at all locations marked on the attached map.
8. Record the NaI and NE Electra measurements on the attached sheet. Note any items or conditions that may have affected the measurement in the "remarks" section.
9. Count swipes for 60 seconds with a SAC-4, record result on attached sheet for removable contamination.

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Final Survey Instructions
Building 776 1st Floor
Survey Unit 776008

Survey Requirements				
Surface	**Type of Survey**	**Probe**	**Placement**	**Count Time**
Floor	Total Alpha Activity	Bicron G-5	On contact	300 seconds
All Surfaces	Total Alpha Activity	Electra with DP-6	On contact	60 seconds
Block walls	Total Alpha Activity	Bicron G-5 or Ludlum 44-17	On contact	300 seconds
All Surfaces	Removable Alpha	SAC-4	Swipe in placed in tray	60 seconds
Ceiling	Total Alpha Activity	Ludlum 44-17	On Contact	300 seconds
Block Walls	Background measurement	Bicron G-5 or Ludlum 44-17	On contact with east wall in room 404	300 seconds
Metal Floors	Background measurement	Bicron G-5 or Ludlum 44-17	Probe waist high, pointed toward ceiling with sheet metal plate on end in room 404	300 seconds
Floors and cement walls	Background measurement	Bicron G-5 or Ludlum 44-17	On contact with floor in room 404	300 seconds
Metal ceilings	Background measurement	Ludlum 44-17	Probe waist high, pointed toward ceiling with sheet metal plate on end in room 404	300 seconds

FINAL SURVEY REPORT
Survey Unit 776008

Introduction and Scope

This report is prepared to summarize preliminary and final surveys of survey unit 776008. The surveys have been performed to determine the extent of contamination in the survey unit. As a result of the low levels of contamination and the lack of remediation required for this survey unit, the final survey was performed in conjunction with the in-process survey.

Survey Unit 776008 consists mainly of the compressor house. Rooms 150 and 150A as well as stairwell 136 make up this unit.

Historical Review

The rooms in this survey unit were non-process areas. The area in this survey unit was for building support functions. The floors in survey unit 776008 were contaminated in a several locations from the spread of water from the fire that occurred in 1969, as well as the spread of contamination from routine operations in the process areas that occurred throughout the life of the building. Cracks in the wall, as well as a few locations on the ceiling and an adjacent beam were contaminated from the 1969 fire as well.

In-process Survey Methods and Techniques

Surfaces were evaluated for potential contamination using sodium iodide (NaI) detectors attached to single channel analyzers windowed for the 59 keV gamma–ray (241Am). The background measurements were taken near column A-5 in room 106B. This location was found to have lower NaI readings than the standard background location on the first floor

Measurements were taken at 30 cm. and on contact. For the 30-cm. measurements on the floors and ceilings, the survey technique involved scanning each grid location to find the highest reading and then taking the measurement at that point. For the 30-cm. measurements on the walls, the reading was taken at the center of each grid; this provides 100% coverage of the walls. In addition, contact measurements were taken on contact every 10 feet on the top of block walls.

Survey measurements on the floors, and ceilings were taken on an established 10-ft. x10-ft. grid pattern. Measurements on the walls were taken on an established 3ft by 3ft grid pattern.

PDS Methods and Techniques

The PDS survey results determine the Average Surface Contamination Value ($ASCV_u$) and source term for the survey unit. These parameters are used to determine whether the building may be demolished within the limits outlined in the "Radiological Pre-Demolition Survey Plan Building 776/777".

In order to comply with the "Radiological Pre-Demolition Survey Plan Building 776/777", a minimum of 30 survey points were selected per survey unit. A random start, systematic grid method was used to identify the survey point locations. Three types of surveys are performed at each survey point as follows:

- Painted surfaces are evaluated for potential contamination under coatings using sodium iodide (NaI) gamma detectors attached to a single channel analyzer windowed for the 59 keV gamma-ray (Am^{241}).

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- Direct alpha surface contamination measurements are performed using an NE Electra survey instrument with attached DP-6 probe. This data may be compared to the NaI survey data to show the fraction of contamination that is directly on the surface verses imbedded in the material matrix.
- Removable surface alpha contamination surveys were performed by swiping the survey point with a 47mm filter paper then counting the filter paper on a SAC-4 alpha counter. This data may be used to determine the effectiveness of encapsulation following the PDS.

To conservatively determine the final Average Surface Contamination Value ($ASCV_u$) for the survey unit, the source term associated with inaccessible areas of the survey unit (as described below) is added to the source term calculated from the PDS survey data.

ALARA Post-Remediation Surveys

Accessible Areas

In addition to the PDS used to determine the Average Surface Contamination Value ($ASCV_u$) and source term for the survey unit, surveys were taken to determine the effectiveness of remediation efforts. Remediation is performed to demonstrate a reasonable best effort is made to maintain releases to the environment and dose to the workers ALARA.

Remediation may include decontamination, or removal of parts of the structure such as block wall removal.

Floors

The floors of survey unit 776008 consist of concrete. Sixteen localized areas of the floor were found to have elevated readings, greater than the MDA. These areas were remediated, and follow-up and final surveys were performed. The decontamination factor (DF) for these locations is approximately 10.25, which results in a 90.25% source term reduction.

Table 1

Floor Remediation Results

	Pre-Remediation	Post-Remediation
Maximum (dpm/100cm^2)	8,625,151	47,468
Average (dpm/100cm^2)	242,293	23,630

Walls

Survey measurements on the walls of survey unit 776008 were taken on an established 3-ft. by 3-ft. grid on each of the 22 wall sections within the unit.

One wall section (Wall 2 section GH) had average contamination values above 100,000 dpm/100cm^2. An investigation was performed on the affected wall. The investigation revealed a seam and cracks on the wall with inaccessible contamination up to 28,538,822 dpm/100cm^2. This wall is structural, and the contamination cannot be safely removed. The remaining sections of the wall all averaged <100,000 dpm/100cm^2. However several other localized areas of inaccessible contamination in the same seam was discovered. This inaccessible

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contamination in the seam will be accounted for in the inaccessible area section. This wall (the north wall of room 127) has already been designated to be painted orange, and requiring special handling. Sections of this wall >24,000,000 dpm/100cm^2 shall be painted blue to indicate its classification as SCOII.

Table 2

B776/777 Survey Unit 776008 - Wall Summary

Wall	Section	Structural	Initial Characterization:		
			Type I	Type II	Type III
776008-1	AB		[redacted]		
776008-1	C		[redacted]		
776008-2	AB		[redacted]		
776008-2	CD		[redacted]		
776008-2	EF		[redacted]		
776008-2	GH			188,882 Note 1	
776008-2	IJ		[redacted]		
776008-3	AB		[redacted]		
776008-4&5	A		[redacted]		
776008-6	A		[redacted]		
776008-7	A		[redacted]		
776008-8	A		[redacted]		
776008-9	A		[redacted]		
776008-10	A		[redacted]		
776008-11	A		[redacted]		
776008-12	A		[redacted]		
776008-13	A		[redacted]		
776008-14	A		[redacted]		
776008-16	A		[redacted]		
776008-17	A		[redacted]		
776008-18	A		[redacted]		
776008-19	A		[redacted]		
[redacted]	**Type I:**	**<100,000 dpm/100 cm^2**			
	Type 2:	**>100,000 dpm/100cm^2 to <1,000,000 dpm/100cm^2**			
	Type 3:	**>1,000,000 dpm/100cm^2**			

Note 1: The major contribution to the contamination on this wall comes from a seam in a structural wall adjacent to room 127. The source term in the seam is accounted for in the inaccessible section.

Ceilings

Three locations on the ceiling and a support beam, adjacent to the south wall, identified in the in-process surveys were investigated. The contamination ranged from 357,049 to 624,194 dpm/100 cm^2, and is considered inaccessible. The source term has been accounted for in the following inaccessible area section. No additional ceiling areas in survey unit 776008 showed contamination in excess of 100,000 dpm/100 cm^2.

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Inaccessible Areas

Cracks

It is conservatively assumed that the contamination is uniformly distributed on both sides of each crack or seam and the contamination on the bottom of the crack or seam is the same magnitude as the contamination measured at the surface.

Approximately 60 linear feet (3.68 m^2) of contaminated cracks was identified on the south wall of survey unit 776008 at levels between 1,162,224 and 28,538,822 dpm/100 cm^2, averaging 7,894,515 dpm/100 cm^2. Since the contamination is in a support wall, remediation was not performed. The amount of activity remaining in the cracks is estimated as:

(3.68 m^2 • 7,894,515 dpm/100 cm^2 * 10,000 cm^2/m^2)/(1 μCi/2.22E6 dpm) = 1308.6 μCi

Seams

Approximately 100 linear feet (6.14 m^2) of contaminated seams was identified on the south wall of survey unit 776008 at levels between 370,845 and 6,966,544 dpm/100 cm^2, averaging 3,023,334 dpm/100 cm^2. Since the contamination is in a support wall, remediation was not performed. The amount of activity remaining in the seams is estimated as:

(6.14 m^2 * 3,023,334 dpm/100 cm^2*10,000 cm^2/m^2)/(1 μCi/2.22E6 dpm) = 836.2 μCi

Columns

5 columns at approximately 0.66 ft wide and 8 ft high (2.45 m^2) with inaccessible contamination were identified along the south wall of survey unit 776008 at levels between 670,031 and 2,905,560 dpm/100 cm^2, averaging 1,602,844 dpm/100 cm^2. Since the contamination is between a support wall and the columns, remediation was not performed. The amount of activity remaining on the columns is estimated as:

(2.45 m^2 • 1,602,844 dpm/100 cm^2*10,000 cm^2/m^2)/(1 μCi/2.22E6 dpm) = 176.9 μCi

Stair landing

Approximately 121 linear feet (7.42 m^2) of contaminated seams was identified on the south wall of survey unit 776008 at levels between 14,501 and 1,002,410 dpm/100 cm^2, averaging 287,456 dpm/100 cm^2. Since the contamination is in a stair landing, remediation was not performed. The amount of activity remaining on the inaccessible surfaces of the landing is estimated as:

(7.42 m^2 • 287,456 dpm/100 cm^2*10,000 cm^2/m^2)/(1 μCi/2.22E6 dpm) = 96.1 μCi

Ceiling/support beam

Approximately 2 m^2 of contaminated ceiling/support beam surfaces were identified adjacent to the south wall of survey unit 776008 at levels between 357,049 and 441,817 dpm/100 cm^2, averaging 474,353 dpm/100 cm^2. Since the contamination is on the ceiling and a support beam, remediation was not performed. The amount of activity remaining on the inaccessible surfaces of the ceiling/support beam is estimated as:

(2 m^2 • 474,353 dpm/100 cm^2*10,000 cm^2/m^2)/(1 μCi/2.22E6 dpm) = 42.7 μCi

Stair steps in room 136

7 contaminated steps approximately 3 ft^2 each (1.95 m^2) were identified in room 136 of survey unit 776008 at levels between 174,421 and 859,038 dpm/100 cm^2, averaging 388,658 dpm/100 cm^2. Since the contamination is inaccessible, remediation was not performed. The amount of activity remaining on the inaccessible surfaces of the stairs is estimated as:

(1.95 m^2 * 388,658 dpm/100 cm^2*10,000 cm^2/m^2)/(1μCi/2.22E6 dpm) = 34.1 μCi

The total estimate of contamination identified above, as part of the ALARA process, remaining in the survey unit is ***2,494.6 μCi.***

PDS Data Summary

The values for the accessible areas and inaccessible areas were summed and divided by the total area for the survey unit to calculate the "Average Surface Contamination Value" ($ASCV_u$) and source term for the survey unit. Refer to attachment 1 for the standard method of calculating the ASCV for each survey unit. The results of these calculations are summarized in Table 3 below:

Table 3:

PDS Final Results

	Final Results
776008 Inaccessible Area Source Term (μCi)	2,494.6
776008 Accessible Area Source Term (μCi)	988.0
776008 Total Source Term (μCi)	3,482.6
Survey Unit Area (m^2)	2,234
($ASCV_u$) (μCi/m^2)	1.56
($ASCV_u$) (dpm/100cm^2)	34,608

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Attachment 1

Standard Method for Calculating the ASCV for Each Survey Unit

Prerequisites:

1. Final survey map for the survey unit
2. PDS survey results
3. Survey information used to estimate activities in inaccessible areas;
4. Survey information for any structural members or elevated regions not represented by the PDS survey.

Conversions:

1 square meter (m^2) = 100 x 100 cm^2

1 microcurie (μCi) = 2.22x 10^6 dpm

1 ($\mu Ci/ m^2$) = 22,200 dpm/ 100cm^2 evenly distributed over one square meter.

12 inches = 1 foot = 0.305 meters

Calculations:

Accessible Area Inventory

1. Calculate the average surface contamination for the applicable survey unit from a minimum of 30 sodium iodide measurements obtained by the PDS survey.
2. Average the total surface contamination activity present.
3. Convert the average surface contamination value from step 2 from "dpm/ 100cm^2" to "$\mu Ci/ m^2$"

   Example:

   22,200 dpm/100cm^2 x (100 x 100 cm^2/ m^2) x (1μCi/2.22x 10^6 dpm) = 1 $\mu Ci/ m^2$

4. Obtain surface area of survey unit from title box of final survey map. This is reported in square meters.
5. Calculate inventory for accessible areas

   The surface area from a survey unit map title box is 1,000 square meters and the average contamination level from the 30 PDS points is 22,200 dpm/ 100cm^2.

   Example:

   1,000 m^2 x 22,200 dpm/ 100cm^2 x (100 x 100 cm^2/ m^2) x (1μCi/2.22x 10^6 dpm) = 1,000 μCi

Inaccessible Area Inventory

1. Document methods used to estimate contamination levels and potential inventory in seams, cracks or other surfaces in the final survey report. Provide an estimated remaining inventory for each item/area in the report.

   Example:

   There are 20 feet of seams contaminated to an average level of 2,220,000 dpm/100 cm^2. Each seam has two sides. The total inventory can be estimated assuming the contamination levels measured at the top of the seam extend down each side of the seam. The depth of the seam can be determined from design drawings or from direct observation as the seam is chipped away. If a seam is determined to be 4 inches deep, then the inventory of the seam can be calculated as follows:

   The contaminated area of the seam is:

   (20 feet x .305 m/ft) * (0.3 feet x 0.305 m/ft) = .61 m^2 x 2 sides = 1.22 m^2

   Therefore the inventory in the seam in μCi is:

   1.22 m^2 * (2,220,000 dpm/100 cm^2) * (10,000 cm^2/ m^{-2})* μCi /2.22E6 dpm = 122 μCi

Attachment 1

Calculating the ASCV

1. Sum the inventories from the inaccessible areas with the inventory for the accessible area to obtain a total inventory for the survey unit.

   Total Inventory = Accessible Inventory + Inaccessible inventory + Inventory items (areas not represented by other inventories listed i.e. Stairs, columns, etc)

   Example: 1000 μCi = accessible inventory

   122 μCi = inaccessible inventory

   100 μCi = inaccessible contamination in the columns and contamination on the stairs

   1000 + 122 + 100 = 1222 μCi

2. Divide the total inventory for the survey unit by the accessible area of the survey unit obtained from the final survey map.

   Example: 1222 μCi = total inventory

   1000 m2 = total surface area of the survey unit

   1222 μCi/1,000 m^2 = 1.22 μCi / m^2

   1.22 μCi /m^2 * (1m^2 /(100*100 cm^2)) * (2.22E6 dpm/μCi) = 27084 dpm/ 100cm^2

Location #	Column letter	Column Number	North	East	Surface	Gross Counts	InProcess dpm/100cm2	Followup dpm/100cm2
8-1	NA	NA	NA	NA	floor	2417	21,970	21,970
8-2	NA	NA	NA	NA	floor	2041	21,970	21,970
8-3	NA	NA	NA	NA	floor	2506	21,970	21,970
8-4	NA	NA	NA	NA	floor	2211	21,970	21,970
8-5	NA	NA	NA	NA	floor	2012	21,970	21,970
8-6	NA	NA	NA	NA	floor	2228	21,970	21,970
8-7	NA	NA	NA	NA	floor	1914	21,970	21,970
8-8	NA	NA	NA	NA	floor	1779	21,970	21,970
8-9	NA	NA	NA	NA	floor	2088	21,970	21,970
8-10	NA	NA	NA	NA	floor	1891	21,970	21,970
8-11	NA	NA	NA	NA	floor	1873	21,970	21,970
8-12	NA	NA	NA	NA	floor	1999	21,970	21,970
8-13	NA	NA	NA	NA	floor	1987	21,970	21,970
8-14	NA	NA	NA	NA	floor	1963	21,970	21,970
8-15	NA	NA	NA	NA	floor	2289	21,970	21,970
8-16	NA	NA	NA	NA	floor	2190	21,970	21,970
8-17	NA	NA	NA	NA	floor	2218	21,970	21,970
8-18	NA	NA	NA	NA	floor	2261	21,970	21,970
8-19	NA	NA	NA	NA	floor	1935	21,970	21,970
8-20	NA	NA	NA	NA	floor	3349	109,737	14,592
8-21	NA	NA	NA	NA	floor	3457	129,229	19,899
8-22	NA	NA	NA	NA	floor	2553	21,970	21,970
8-23	NA	NA	NA	NA	floor	2552	21,970	21,970
8-24	NA	NA	NA	NA	floor	2238	21,970	21,970
8-25	NA	NA	NA	NA	floor	2104	21,970	21,970
8-26	NA	NA	NA	NA	floor	2627	21,970	21,970
8-27	NA	NA	NA	NA	floor	2014	21,970	21,970
8-28	NA	NA	NA	NA	floor	2153	21,970	21,970
8-29	NA	NA	NA	NA	floor	2050	21,970	21,970
8-30	NA	NA	NA	NA	floor	1942	21,970	21,970
8-31	NA	NA	NA	NA	floor	1963	21,970	21,970
8-32	NA	NA	NA	NA	floor	2057	21,970	21,970
8-33	NA	NA	NA	NA	floor	1895	21,970	21,970
8-34	NA	NA	NA	NA	floor	1833	21,970	21,970
8-35	NA	NA	NA	NA	floor	2134	21,970	21,970
8-36	NA	NA	NA	NA	floor	2420	21,970	21,970
8-37	NA	NA	NA	NA	floor	2324	21,970	21,970
8-38	NA	NA	NA	NA	floor	2825	21,970	21,970
8-39	NA	NA	NA	NA	floor	2418	21,970	21,970
8-40	NA	NA	NA	NA	floor	3004	47,468	47,468
8-41	NA	NA	NA	NA	floor	3582	151,790	21,970

Location #	Column letter	Column Number	North	East	Surface	Gross Counts	InProcess dpm/100cm2	Followup dpm/100cm2
8-42	NA	NA	NA	NA	floor	2558	21,970	21,970
8-43	NA	NA	NA	NA	floor	2420	21,970	21,970
8-44	NA	NA	NA	NA	floor	2464	21,970	21,970
8-45	NA	NA	NA	NA	floor	2029	21,970	21,970
8-46	NA	NA	NA	NA	floor	2171	21,970	21,970
8-47	NA	NA	NA	NA	floor	2123	21,970	21,970
8-48	NA	NA	NA	NA	floor	2098	21,970	21,970
8-49	NA	NA	NA	NA	floor	2173	21,970	21,970
8-50	NA	NA	NA	NA	floor	1968	21,970	21,970
8-51	NA	NA	NA	NA	floor	2057	21,970	21,970
8-52	NA	NA	NA	NA	floor	7867	925,180	21,970
8-53	NA	NA	NA	NA	floor	12891	1,831,951	14,592
8-54	NA	NA	NA	NA	floor	2015	21,970	21,970
8-55	NA	NA	NA	NA	floor	2432	21,970	21,970
8-56	NA	NA	NA	NA	floor	2382	21,970	21,970
8-57	NA	NA	NA	NA	floor	2271	21,970	21,970
8-58	NA	NA	NA	NA	floor	3426	123,634	19,899
8-59	NA	NA	NA	NA	floor	2956	38,805	38,805
8-60	NA	NA	NA	NA	floor	2754	21,970	21,970
8-61	LA-11A		5	18	floor	3331	102,698	19,975
8-62	LA-11A		12	8	floor	2526	22,054	22,054
8-63	LA-10A		9	18	floor	2215	22,054	22,054
8-64	LA-10A		7	10	floor	2387	22,054	22,054
8-65	LA-9A		4	29	floor	2165	22,054	22,054
8-66	LA-9A		4	20	floor	2051	22,054	22,054
8-67	LA-9A		7	7	floor	2162	22,054	22,054
8-68	LA-7A		7	27	floor	50550	8,625,151	14,648
8-69	LA-7A		6	22	floor	41363	6,967,010	14,648
8-70	LA-7A		3	9	floor	2737	22,054	22,054
8-71	LA-6A		5	25	floor	2377	22,054	22,054
8-72	LA-6A		6	19	floor	2295	22,054	22,054
8-73	LA-6A		7	10	floor	2222	22,054	22,054
8-74	LA-6A		2	25	floor	2344	22,054	22,054
8-75	LA-4A		6	19	floor	2179	22,054	22,054
8-76	LA-4A		6	10	floor	2314	22,054	22,054
8-77	LA-3A		2	29	floor	4479	309,898	14,648
8-78	LA-3A		0	26	floor	2323	22,054	22,054
8-79	LA-3A		-1	8	floor	2787	22,054	22,054
8-80					floor	2937	31,585	31,585
8-81					floor	3482	129,951	41,238
8-82					floor	3665	162,980	26,828

Location #	Column letter	Column Number	North	East	Surface	Gross Counts	InProcess dpm/100cm2	Followup dpm/100cm2
8-83	LA-3A		-5	20	floor	3010	44,761	44,761
8-84	LA-3A		6	28	floor	2839	22,054	22,054
8-85	LA-4A		0	10	floor	2479	22,054	22,054
8-86	LA-4A		0	19	floor	2715	22,054	22,054
8-87	LA-4A		0	26	floor	2530	22,054	22,054
8-88	LA-6A		-1	7	floor	3057	53,244	53,244
8-89	LA-6A		0	19	floor	3187	76,707	76,707
8-90	LA-6A		0	25	floor	2809	22,054	22,054
8-91	LA-7A		0	9	floor	2846	22,054	22,054
8-92	LA-7A		0	25	floor	9958	1,298,790	14,648
8-93	LA-7A		0	26	floor	9269	1,174,434	14,648
8-94	LA-9A		0	8	floor	2707	22,054	22,054
8-95	LA-9A		-1	18	floor	2621	22,054	22,054
8-96	LA-9A		0	29	floor	2690	22,054	22,054
8-97	LA-10A		0	12	floor	2862	22,054	22,054
8-98	LA-11A		1	2	floor	3097	60,463	60,463
8-99	LA-11A		3	10.5	floor	2464	22,054	22,054
8-100	LA-11A		1	18	floor	3416	118,039	19,975
8-101	MA	3A	18	5	CEILING	63	29,406	29,406
8-102	MA	3A	18.5	14.5	CEILING	67	29,406	29,406
8-103	MA	3A	18.5	17.5	CEILING	78	29,406	29,406
8-104	MA	4A	15	5	CEILING	84	29,406	29,406
8-105	MA	4A	15	16	CEILING	77	29,406	29,406
8-106	MA	4A	19	20	CEILING	87	29,406	29,406
8-107	MA	6A	19	3	CEILING	83	29,406	29,406
8-108	MA	6A	18	11	CEILING	75	29,406	29,406
8-109	MA	6A	19	28	CEILING	72	29,406	29,406
8-110	MA	7A	11	1	CEILING	67	29,406	29,406
8-111	MA	7A	18	11	CEILING	73	29,406	29,406
8-112	MA	7A	15	21	CEILING	99	29,406	29,406
8-113	MA	9A	11	2	CEILING	88	29,406	29,406
8-114	MA	9A	11	11	CEILING	90	29,406	29,406
8-115	MA	9A	14	21	CEILING	93	29,406	29,406
8-116	MA	10A	11	3	CEILING	78	29,406	29,406
8-117	MA	10A	10	13	CEILING	89	29,406	29,406
8-118	MA	11A	15	5	CEILING	92	29,406	29,406
8-119	MA	11A	11	10	CEILING	104	29,406	29,406
8-120	MA	11A	17	19.5	CEILING	98	29,406	29,406
8-121	MA	11A	10	11	CEILING	84	29,406	29,406
8-122	MA	11A	1	10	CEILING	86	29,406	29,406
8-123	MA	11A	1	1	CEILING	92	29,406	29,406

Location #	Column letter	Column Number	North	East	Surface	Gross Counts	InProcess dpm/100cm2	Followup dpm/100cm2
8-124	MA	10A	3.5	10	CEILING	79	29,406	29,406
8-125	MA	10A	9	2.5	CEILING	75	29,406	29,406
8-126	MA	9A	1	27	CEILING	84	29,406	29,406
8-127	MA	9A	5	19	CEILING	96	29,406	29,406
8-128	MA	9A	1	9	CEILING	101	29,406	29,406
8-129	MA	7A	6.5	25	CEILING	97	29,406	29,406
8-130	MA	7A	9	19	CEILING	92	29,406	29,406
8-131	MA	7A	2	2	CEILING	104	29,406	29,406
8-132	MA	6A	2	21	CEILING	71	29,406	29,406
8-133	MA	6A	5	11.5	CEILING	80	29,406	29,406
8-134	MA	6A	2	2	CEILING	71	29,406	29,406
8-135	MA	4A	3.5	15.5	CEILING	86	29,406	29,406
8-136	MA	4A	5	10	CEILING	90	29,406	29,406
8-137	MA	4A	5	1.5	CEILING	89	29,406	29,406
8-138	MA	3A	5	19	CEILING	94	29,406	29,406
8-139	MA	3A	2.5	15	CEILING	89	29,406	29,406
8-140	MA	3A	4	5	CEILING	72	29,406	29,406
8-141	L	3	14	3	CEILING	53	14,856	14,856
8-142	L	3	13	14	CEILING	93	14,856	14,856
8-143	L	4	16	2	CEILING	101	14,856	14,856
8-144	L	4	14	11	CEILING	78	14,856	14,856
8-145	L	5	12	4	CEILING	80	14,856	14,856
8-146	L	5	17	16	CEILING	82	14,856	14,856
8-147	L	6	16	3	CEILING	92	14,856	14,856
8-148	L	6	18	14	CEILING	35	14,856	14,856
8-149	L	7	16	2	CEILING	61	14,856	14,856
8-150	L	7	16	17	CEILING	73	14,856	14,856
8-151	L	8	18	3	CEILING	87	14,856	14,856
8-152	L	8	16	17	CEILING	72	14,856	14,856
8-153	L	9	16	2	CEILING	49	14,856	14,856
8-154	L	9	18	13	CEILING	88	14,856	14,856
8-155	L	10	16	3	CEILING	53	14,856	14,856
8-156	L	10	17	16	CEILING	47	14,856	14,856
8-157	L	11	16	2	CEILING	101	14,856	14,856
8-158	L	11	16	19	CEILING	95	14,856	14,856
8-159	L	12	18	7	CEILING	67	14,856	14,856
8-160	L	12	18	12	CEILING	127	17,981	17,981
8-161	L	12	8	14	CEILING	62	14,856	14,856
8-162	L	12	6	8	CEILING	94	14,856	14,856
8-163	L	11	6	13	CEILING	92	14,856	14,856
8-164	L	11	8	2	CEILING	89	14,856	14,856

Location #	Column letter	Column Number	North	East	Surface	Gross Counts	InProcess dpm/100cm2	Followup dpm/100cm2
8-165	L	10	7	16	CEILING	66	14,856	14,856
8-166	L	10	6	5	CEILING	54	14,856	14,856
8-167	L	9	5	16	CEILING	63	14,856	14,856
8-168	L	9	8	3	CEILING	99	14,856	14,856
8-169	L	8	6	14	CEILING	108	14,856	14,856
8-170	L	8	6	1	CEILING	78	14,856	14,856
8-171	L	7	5	11	CEILING	69	14,856	14,856
8-172	L	7	6	3	CEILING	48	14,856	14,856
8-173	L	6	7	16	CEILING	75	14,856	14,856
8-174	L	6	6	2	CEILING	93	14,856	14,856
8-175	L	5	6	18	CEILING	89	14,856	14,856
8-176	L	5	9	2	CEILING	88	14,856	14,856
8-177	L	4	6	18	CEILING	78	14,856	14,856
8-178	L	4	6	4	CEILING	54	14,856	14,856
8-179	L	3	7	17	CEILING	81	14,856	14,856
8-180	L	3	8	9	CEILING	111	14,856	14,856
8-181	L	3	2	2	CEILING	575	305,675	305,675
8-182	L	3	1	14	CEILING	171	46,237	46,237
8-183	L	4	3	2	CEILING	1011	585,664	585,664
8-184	L	4	2	12	CEILING	60	14,856	14,856
8-185	L	5	1	2	CEILING	692	380,810	380,810
8-186	L	5	1	14	CEILING	89	14,856	14,856
8-187	L	6	2	3	CEILING	67	14,856	14,856
8-188	L	6	1	12	CEILING	153	34,677	34,677
8-189	L	7	2	1	CEILING	378	179,167	179,167
8-190	L	7	2	1	CEILING	165	42,384	42,384
8-191	L	8	3	2	CEILING	157	37,246	37,246
8-192	L	8	1	15	CEILING	178	50,732	50,732
8-193	L	9	1	1	CEILING	106	14,856	14,856
8-194	L	9	1	14	CEILING	172	46,879	46,879
8-195	L	10	2	3	CEILING	146	30,182	30,182
8-196	L	10	1	17	CEILING	39	14,856	14,856
8-197	L	11	1	9	CEILING	60	14,856	14,856
8-198	L	11	2	12	CEILING	182	53,301	53,301
8-199	L	12	1	2	CEILING	82	14,856	14,856
8-200	L	12	3	19	CEILING	86	14,856	14,856
8-201	K	11	15	15	stairwell	105	14,048	14,048
8-202	K	11	15	5	stairwell	102	13,934	13,934

Total Surface Activity

Survey Area:		VII	Survey Unit:	776008			
Meter Model:		NE Electra w/ DP6 Probe				Date:	1/8/05
		1	2	3			
Instrument #:		1418	1245	N/A	N/A	A priori MDA:	94
Cal. Due Date:		6/2/05	2/23/05	N/A	N/A	Avg. Local Bkgd	9.9
Efficiency (c/d):		22.40%	28.50%	N/A	N/A	Avg. Efficiency	0.255
Sample Location #	RCT ID #	Inst. #	Local Bkgd (cpm)	Gross (cpm)		(dpm/100 cm^2)	
1	Inaccessible	N/A	N/A	N/A		N/A	
2	Inaccessible	N/A	N/A	N/A		N/A	
3	Inaccessible	N/A	N/A	N/A		N/A	
4	1	1	9.0	16.0		27.5	
5	1	1	4.0	7.0		11.8	
6	1	1	6.0	8.0		7.9	
7	1	1	3.0	3.0		0.0	
8	1	1	4.0	6.0		7.9	
9	1	1	3.0	5.0		7.9	
10	1	1	4.0	3.0		-3.9	
11	1	1	3.0	3.0		0.0	
12	1	1	2.0	2.0		0.0	
13	1	1	3.0	6.0		11.8	
14	1	1	4.0	8.0		15.7	
15	1	1	3.0	7.0		15.7	
16	2	2	5.0	84.0		310.4	
17	2	2	3.0	10.0		27.5	
18	2	2	4.0	9.0		19.6	
19	2	2	2.0	4.0		7.9	
20	2	2	3.0	10.0		27.5	
21	2	2	2.0	3.0		3.9	
22	2	2	5.0	10.0		19.6	
23	2	2	5.0	7.0		7.9	
24	2	2	3.0	5.0		7.9	
25	2	2	4.0	5.0		3.9	
26	2	2	4.0	9.0		19.6	
27	2	2	5.0	9.0		15.7	
28	2	2	6.0	8.0		7.9	
29	2	2	5.0	10.0		19.6	
30	Inaccessible	N/A	N/A	N/A		N/A	
					MIN	-3.9	
					MAX	310.4	
					MEAN	23.1	
					SD	59.3	

Removable Activity

Survey Area:		VII	Survey Unit:		776008
Dates Counted:	1/8/05				
A priori MDA:	16				
Efficiency (c/d)	0.333				
Smear Location Number	Smear Results				
	RCT ID #	Serial Number	Gross (cpm)	Bkg.	(dpm/100 cm^2)
1	Inaccessible	N/A	N/A	N/A	N/A
2	Inaccessible	N/A	N/A	N/A	N/A
3	Inaccessible	N/A	N/A	N/A	N/A
4	1	812	3.0	0.1	8.7
5	1	812	0.0	0.1	-0.3
6	1	812	3.0	0.1	8.7
7	1	812	6.0	0.1	17.7
8	1	812	0.0	0.1	-0.3
9	1	812	2.0	0.1	5.7
10	1	812	0.0	0.1	-0.3
11	1	812	1.0	0.1	2.7
12	1	812	1.0	0.1	2.7
13	1	812	0.0	0.1	-0.3
14	1	812	1.0	0.1	2.7
15	1	812	1.0	0.1	2.7
16	2	1196	0.0	0.0	0.0
17	2	1196	3.0	0.0	9.0
18	2	1196	1.0	0.0	3.0
19	2	1196	0.0	0.0	0.0
20	2	1196	2.0	0.0	6.0
21	2	1196	3.0	0.0	9.0
22	2	1196	0.0	0.0	0.0
23	2	1196	1.0	0.0	3.0
24	2	1196	0.0	0.0	0.0
25	2	1196	1.0	0.0	3.0
26	2	1196	0.0	0.0	0.0
27	2	1196	3.0	0.0	9.0
28	2	1196	1.0	0.0	3.0
29	2	1196	1.0	0.0	3.0
30	Inaccessible	N/A	N/A	N/A	N/A
				MIN	**-0.3**
				MAX	**17.7**
				MEAN	**3.8**
				SD	**4.4**

Sodium Iodide Instrument Information

Survey Area:	VII	Survey Unit:	776008	Survey Date(s):	01/08/05

Instrument Specifications

Instrument #	1	2
Meter Model:	Ludlum 2350-1	Ludlum 2350-1
Meter Serial #:	203457	192616
Detector Model:	Ludlum 44-17	Bicron G-5
Detector #:	15156	B192N
Detector Size (cm^2):	17.8	125
Calibration Due Date:	6/9/05	6/14/05
Count Time (min)	5	5
Contact Efficiency	7.30%	7.80%

Background (Gross)

Instrument #	1	2
Gamma (Ceilings)	261	N/A
Gamma (Floors)	N/A	N/A
Gamma (Walls)	764	N/A

Background (cpm)

Instrument #	1	2
Gamma (Ceilings)	52.2	N/A
Gamma (Floors)	N/A	N/A
Gamma (Walls)	152.8	N/A

Efficiencies (cpm/dpm)

Instrument #	1	2
Thin/No Paint	0.072	0.077
Epoxy	0.059	0.063
Other	0.069	0.074

Ratio Used

Pu to Am - 241	8.1

Comments

In cases where the critical level is greater than the calculated dpm/100cm2, the critical level will be used for statistical analysis.

Count Times for backgrounds and samples are equal.

Attenuation Factors: Based on observation of Walls and Ceilings. Epoxy on Floor determined by chip sampling.

Coatings	Thickness (inches)
Thin/No Paint	0.015
Epoxy	0.250
Other	0.06

Sodium Iodide Instrument Information

Survey Area:	VII	Survey Unit:	776008	Survey Date(s):	01/08/05

Instrument Specifications

Instrument #	1	2
Meter Model:	Ludlum 2350-1	Ludlum 2350-1
Meter Serial #:	203457	192616
Detector Model:	Ludlum 44-17	Bicron G-5
Detector #:	15156	B192N
Detector Size (cm^2):	17.8	125
Calibration Due Date:	6/9/05	6/14/05
Count Time (min)	5	5
Contact Efficiency	7.30%	7.80%

Background (Gross)

Instrument #	1	2
Gamma (Ceilings)	N/A	9245
Gamma (Floors)	N/A	12,617
Gamma (Walls)	525	N/A

Background (cpm)

Instrument #	1	2
Gamma (Ceilings)	N/A	1849
Gamma (Floors)	N/A	2523.4
Gamma (Walls)	105	N/A

Efficiencies (cpm/dpm)

Instrument #	1	2
Thin/No Paint	0.072	0.077
Epoxy	0.059	0.063
Other	0.069	0.074

Ratio Used

Pu to Am - 241	8.1

Comments

In cases where the critical level is greater than the calculated dpm/100cm2, the critical level will be used for statistical analysis.

Count Times for backgrounds and samples are equal.

Attenuation Factors: Based on observation of Walls and Ceilings. Epoxy on Floor determined by chip sampling.

Coatings	Thickness (inches)
Thin/No Paint	0.015
Epoxy	0.250
Other	0.06

Total Activity Estimates Using Sodium Iodide Instruments

Survey Area:	VII	Survey Unit:	776008	Survey Date(s):	01/08/05

Sample Location #	RCT ID #	Instrument #	Gross Counts	Critical Level (dpm/100cm2)	Total Alpha (dpm/100cm2)
1	1	1	193	4,746	4,746
2	1	1	164	4,746	4,746
3	1	1	175	4,746	4,746
4	N/A	N/A	N/A	N/A	N/A
5	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
7	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
9	1	1	742	8,121	8,121
10	N/A	N/A	N/A	N/A	N/A
11	N/A	N/A	N/A	N/A	N/A
12	N/A	N/A	N/A	N/A	N/A
13	N/A	N/A	N/A	N/A	N/A
14	N/A	N/A	N/A	N/A	N/A
15	1	1	180	4,746	4,746
16	N/A	N/A	N/A	N/A	N/A
17	N/A	N/A	N/A	N/A	N/A
18	N/A	N/A	N/A	N/A	N/A
19	N/A	N/A	N/A	N/A	N/A
20	N/A	N/A	N/A	N/A	N/A
21	N/A	N/A	N/A	N/A	N/A
22	N/A	N/A	N/A	N/A	N/A
23	N/A	N/A	N/A	N/A	N/A
24	2	1	260	4,746	4,746
25	N/A	N/A	N/A	N/A	N/A
26	N/A	N/A	N/A	N/A	N/A
27	2	1	545	8,121	8,121
28	N/A	N/A	N/A	N/A	N/A
29	N/A	N/A	N/A	N/A	N/A
30	2	1	148	4,746	4,746

Total Activity Estimates Using Sodium Iodide Instruments

Survey Area:	VII	Survey Unit:	776008	Survey Date(s):	01/08/05

Sample Location #	RCT ID #	Instrument #	Gross Counts	Critical Level (dpm/100cm2)	Total Alpha (dpm/100cm2)
1	N/A	N/A	N/A	N/A	N/A
2	N/A	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A	N/A
4	3	2	16825	3,765	127,575
5	1	1	554	6,732	6,732
6	1	1	590	6,732	8,209
7	1	1	536	6,732	6,732
8	1	1	566	6,732	6,732
9	N/A	N/A	N/A	N/A	N/A
10	3	2	12190	4,398	4,398
11	3	2	11073	4,398	4,398
12	3	2	10560	4,398	4,398
13	3	2	10953	4,398	4,398
14	3	1	561	6,732	6,732
15	N/A	N/A	N/A	N/A	N/A
16	4	2	12174	4,398	4,398
17	4	2	11678	4,398	4,398
18	4	2	13291	4,398	11,344
19	4	2	12470	4,398	4,398
20	4	2	11362	4,398	4,398
21	4	2	11294	4,398	4,398
22	4	2	12819	4,398	4,398
23	4	2	10578	4,398	4,398
24	N/A	N/A	N/A	N/A	N/A
25	2	1	116	6,732	6,732
26	2	1	519	6,732	6,732
27	N/A	N/A	N/A	N/A	N/A
28	2	1	582	6,732	7,198
29	2	1	550	6,732	6,732
30	N/A	N/A	N/A	N/A	N/A

Survey Unit 776008

Sample Location Number	Measurement Used	Comment	Surface	Coating	(dpm/100 cm^2)
1	Sodium Iodide	N/A	Ceiling	Thin/No Paint	4,746
2	Sodium Iodide	N/A	Ceiling	Thin/No Paint	4,746
3	Sodium Iodide	N/A	Ceiling	Thin/No Paint	4,746
4	Sodium Iodide	N/A	Ceiling	Thin/No Paint	127,575
5	Sodium Iodide	N/A	Wall	Thin/No Paint	6,732
6	Sodium Iodide	N/A	Wall	Thin/No Paint	8,209
7	Sodium Iodide	N/A	Wall	Thin/No Paint	6,732
8	Sodium Iodide	N/A	Wall	Thin/No Paint	6,732
9	Sodium Iodide	N/A	Wall	Thin/No Paint	8,121
10	Sodium Iodide	N/A	Floor	Thin/No Paint	4,398
11	Sodium Iodide	N/A	Floor	Thin/No Paint	4,398
12	Sodium Iodide	N/A	Floor	Thin/No Paint	4,398
13	Sodium Iodide	N/A	Floor	Thin/No Paint	4,398
14	Sodium Iodide	N/A	Wall	Thin/No Paint	6,732
15	Sodium Iodide	N/A	Ceiling	Thin/No Paint	4,746
16	Sodium Iodide	N/A	Floor	Thin/No Paint	4,398
17	Sodium Iodide	N/A	Floor	Thin/No Paint	4,398
18	Sodium Iodide	N/A	Floor	Thin/No Paint	11,344
19	Sodium Iodide	N/A	Floor	Thin/No Paint	4,398
20	Sodium Iodide	N/A	Floor	Thin/No Paint	4,398
21	Sodium Iodide	N/A	Floor	Thin/No Paint	4,398
22	Sodium Iodide	N/A	Floor	Thin/No Paint	4,398
23	Sodium Iodide	N/A	Floor	Thin/No Paint	4,398
24	Sodium Iodide	N/A	Ceiling	Thin/No Paint	4,746
25	Sodium Iodide	N/A	Wall	Thin/No Paint	6,732
26	Sodium Iodide	N/A	Wall	Thin/No Paint	6,732
27	Sodium Iodide	N/A	Wall	Thin/No Paint	8,121
28	Sodium Iodide	N/A	Wall	Thin/No Paint	7,198
29	Sodium Iodide	N/A	Wall	Thin/No Paint	6,732
30	Sodium Iodide	N/A	Ceiling	Thin/No Paint	4,746
				MIN	**4398**
				MAX	**127575**
				AVERAGE	**9818**
				SD	**22305**

Survey Unit 776008 Summary

Total Activity Measurements

30	30
Number Required	Number Obtained

MIN	4398	dpm/100 cm^2
MAX	127575	dpm/100 cm^2
Average	9818	dpm/100 cm^2
STD DEV	22305	dpm/100 cm^2

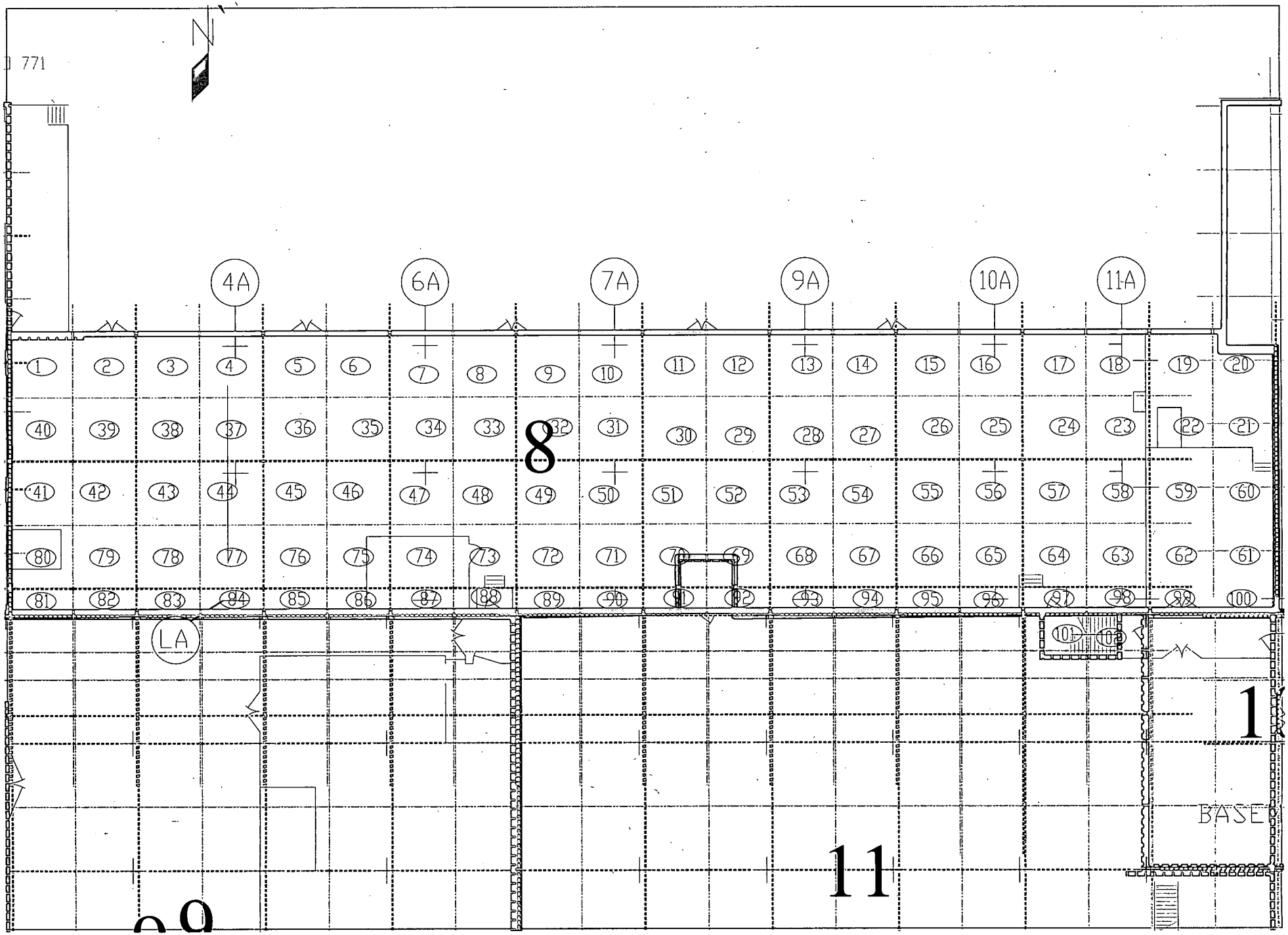
***Average Contamination Value for Accessable Areas Only**

Inaccessible Areas 2494.6 uCi, Alpha

Total Surface Area 2234 m^2
Accessible Inventory = 988.0 uCi, Alpha

Total Inventory 3482.6 uCi, Alpha

$ASCV_u$ =	1.56	uCi/m^2
$ASCV_u$ =	34,608	dpm/100 cm^2



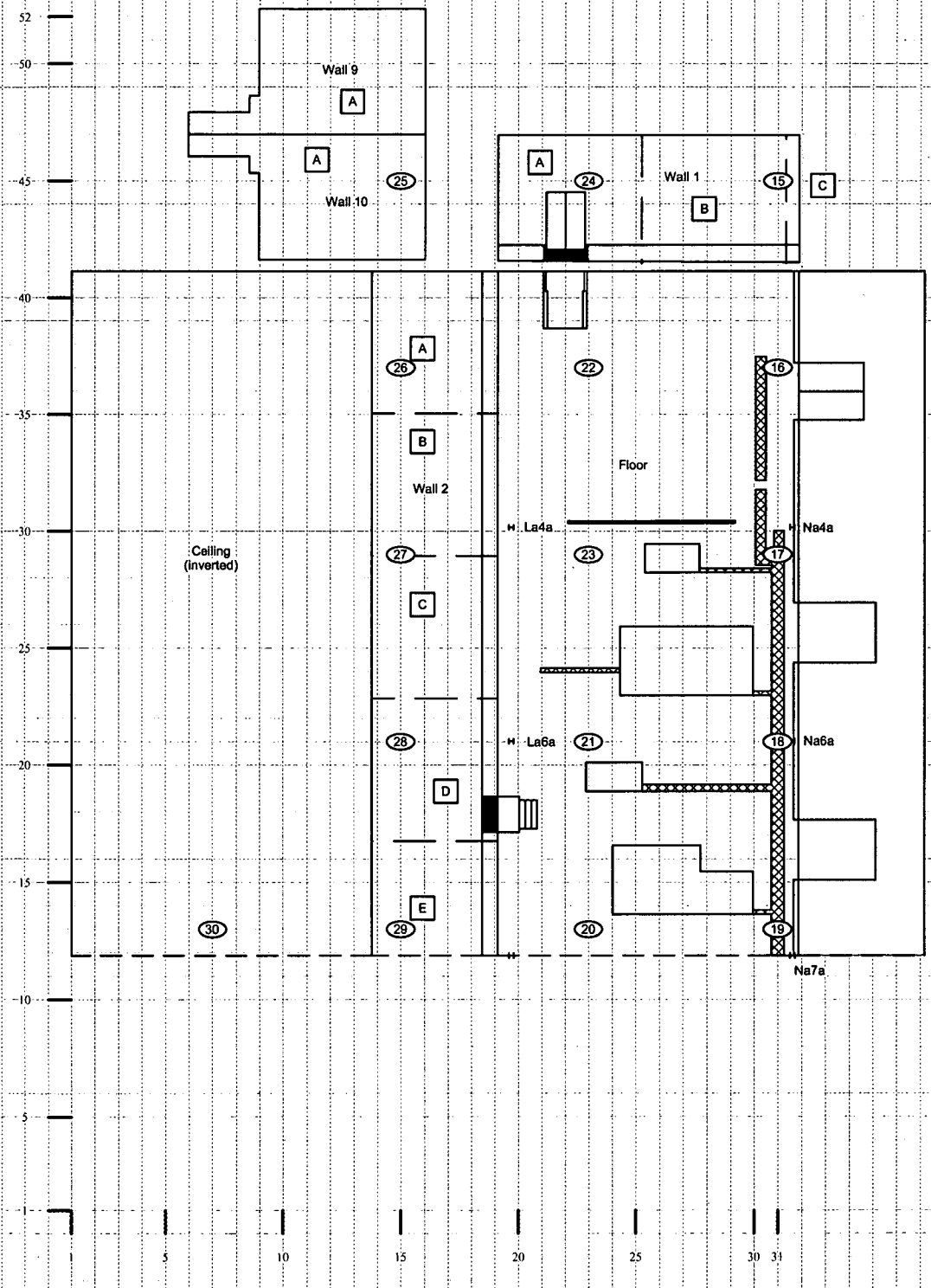
UNIT 8 FLOOR

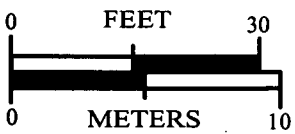
RADIOLOGICAL CLOSEOUT SURVEY FOR THE 776 CLUSTER

Survey Area: VII **Survey Unit: 776008** **Classification: NA**
Building: 776
Survey Unit Description: First floor- Compressor House

Total Floor Area: 790 sq. m **Total Area: 2234 sq. m** **Random Start Grid Size: 8 x 8 sq. m**

SURVEY UNIT 776008 - MAP 1 OF 3





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SURVEY MAP LEGEND
- Smear & TSC Location
- Smear, TSC & Sample Location
- Open/Inaccessible Area
- Area not surveyed

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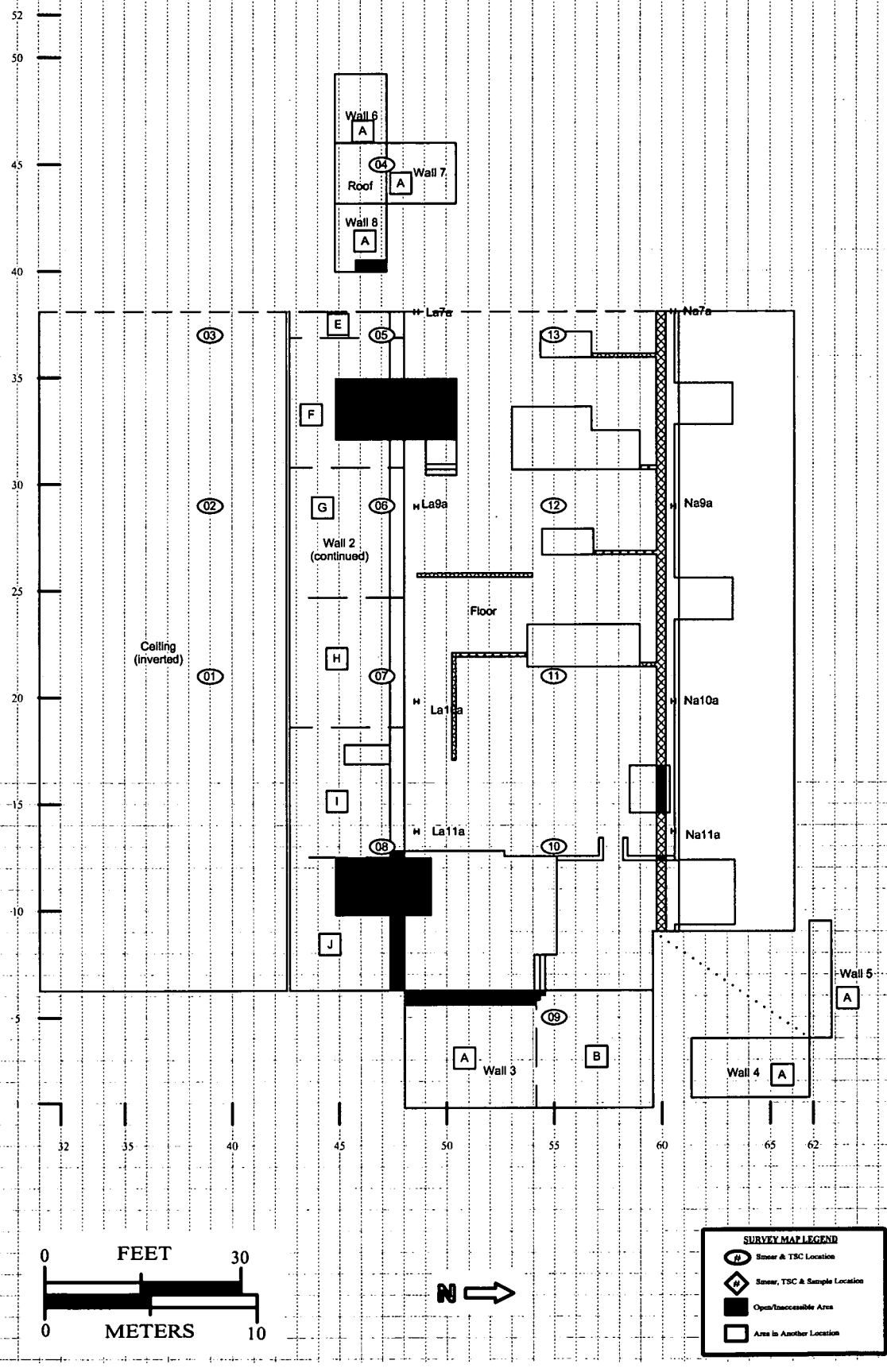
RADIOLOGICAL CLOSEOUT SURVEY FOR THE 776 CLUSTER

Survey Area: VII **Survey Unit: 776008** **Classification: NA**
Building: 776
Survey Unit Description: First floor- Compressor House

Total Floor Area: 790 sq. m **Total Area: 2234 sq. m** **Random Start Grid Size: 8 x 8 sq. m**

SURVEY UNIT 776008 - MAP 2 OF 3

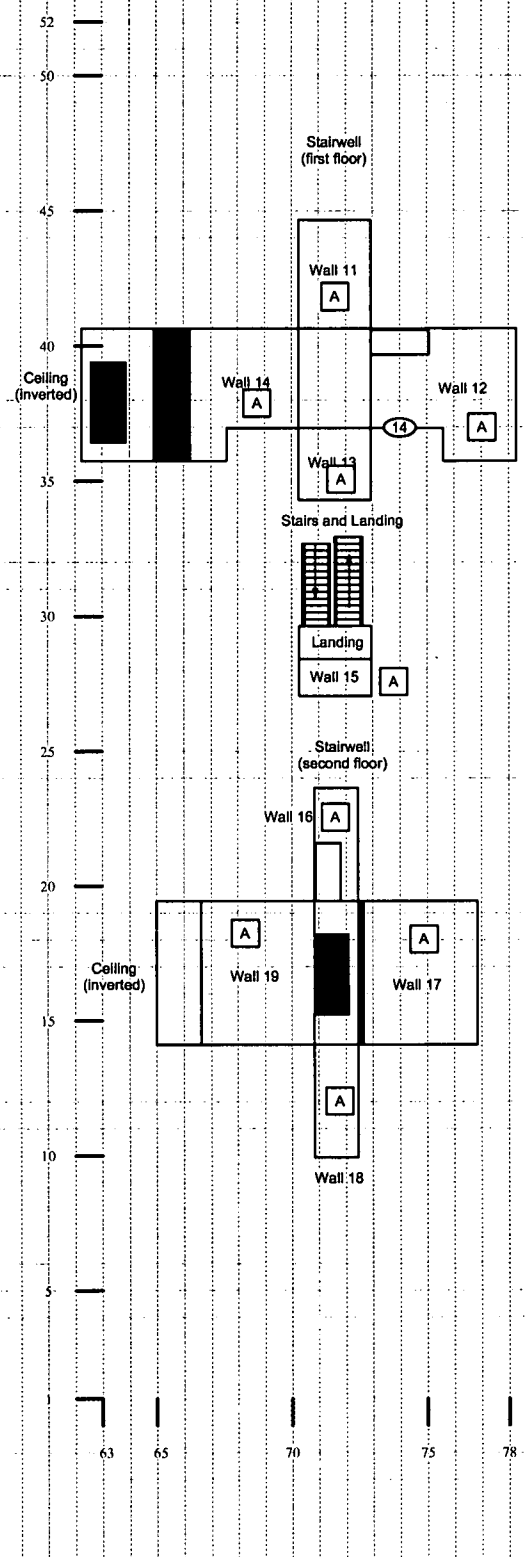


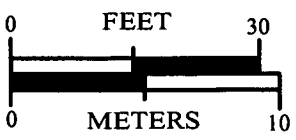
RADIOLOGICAL CLOSEOUT SURVEY FOR THE 776 CLUSTER

Survey Area: VII **Survey Unit:** 776008 **Classification:** NA
Building: 776
Survey Unit Description: First floor- Compressor House

Total Floor Area: 790 sq. m **Total Area:** 2234 sq. m **Random Start Grid Size:** 8 x 8 sq. m

SURVEY UNIT 776008 - MAP 3 OF 3





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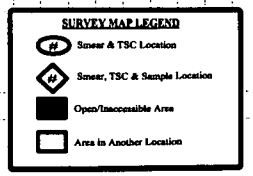

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